INDEX

All original articles published in the January through December, 1958 issues are abstracted in this index. See page 791.

SUBJECT INDEX

This is an index of all the reading matter in the ARCHIVES, except the Medical News Department.

The letters used to explain in which department the matter indexed appears are as follows: "ab," abstracts, "E," editorial and the asterisk (*) indicates an original article in the ARCHIVES.

This is a subject index and one should, therefore, look for the subject word, with the following exceptions: "Book Reviews" and "Deaths," are indexed under these titles at the end of the letters "B" and "D." The name of the author, in brackets, follows the subject entry. If there are more than two authors, only the name of the first author is given.

For author index, see page 789.

A

BOOK REVIEWS

C

D

DEATHS

E

N

O

P

INDEX TO PAGES

Of the Archives, According to Monthly Issues — Volume 39, January-December, 1958

AUTHOR INDEX

In this Index are the names of the authors which have appeared in the ARCHIVES. The asterisk (*) preceding the page reference indicates that the article appeared in full in the ARCHIVES: "E" refers to editorial and "ab" indicates that the article appeared in abstract form. For subject index, see page 781.

ABSTRACTS

The following abstracted articles have been published in the January-December, 1958 issues of the journal.

JANUARY

Implications of Measured Visuospatial Impairment in a Group of Left Hemiplegic Patients. V. B. Carroll. *(pp. 11-14)*

● An analysis of errors on the Minnesota Test for Differential Diagnosis of Aphasia with left hemiplegic patients is presented in contrast with known test patterns of right hemiplegic patients with aphasia. The specific findings with the nondominant hemisphere group reveal a significant homogenous deficit in visuospatial, temporal and numerical relationships as well as a similarity in behavior responses to the observed impairment. The therapy attempted is discussed and the patient response is related to known concepts of learning theory. The implications of the residual deficits are then related to the individual vocational needs of the patient.

Comparative Study of the Effects of Tenotomy and of Denervation. C. H. Flint; K. G. Wakim, and F. H. Krusen. *(pp. 15-19; 3 figures and 3 tables)*

● In a large group of adult albino rats a comparative study at intervals up to 120 days was made of the work output, endurance, weight, and histologic structure of the muscles of the tendo achillis and the tibialis anterior in the lower extremities after tenotomy of the tendo achillis, excision of the tibial nerve alone, or complete denervation by high excision of the sciatic and femoral nerves. Excision of the tendo achillis led to gradual reduction of work output and endurance of the gastrocnemius-soleus-plantaris muscle group up to 30 days, after which there was a progressive return toward normal function. Careful dissection of the muscles at the time of return to normal function revealed complete reattachment of the excised tendon to bony eminences in the area. Tibial denervation gave unsatisfactory results. The findings were inconsistent. Complete denervation by excision of both sciatic and femoral nerves high up in the thigh was associated with consistent progressive deterioration of function, resulting in marked reduction of work output and endurance of the muscles and a histologic picture of complete denervation with marked decrease of muscle weight. The work output was practically nil toward the end of the observation period (120 days) in the muscles whose nerve supply was abolished by high excision of the sciatic and femoral nerves.

Occurrence of So-Called "Myotonic Discharges" in Electromyography. J. Goodgold, and K. C. Archibald. *(pp. 20-22; 3 figures and 1 table)*

● The occurrence of chains of high frequency oscillating electrical potentials combined with a characteristic "dive bomber" audio output is most usually associated with the classical myotonias (myotonia congenita and myotonia dystrophica). It appears rather that such characteristic potentials are most likely a manifestation of increased muscle irritability and are also seen in a variety of conditions including progressive muscular dystrophy, progressive muscular atrophy, and in various peripheral neuropathies. This study presents an analysis of the cases studied in the electrodiagnostic laboratory at the Institute of Physical Medicine and Rehabilitation in New York City along with a review of the literature and a discussion of etiological background of "myotonic" discharges.

Stair Climbing as Exercise. G. G. Hirschberg. *(pp. 23-27; 1 figure)*

● In rehabilitation, stair climbing is generally considered an activity of daily living which must be mastered. Stairs in the physical therapy department are used as "training stairs." This paper emphasizes the use of stair climbing as an exercise for weak lower extremities. Its advantages over manual resistance, pulley or boot exercises for strengthening are numerous: simultaneous exercise of several muscle groups, facilitation because of primitive pattern, economy of self exercise and group exercise. For coordination, stair climbing is simpler and more effective than Frenkel exercises and "gait training" because step width and height offer a two dimensional guide to the foot. Finally, stairs are readily available in hospitals and in most homes. Indications for stair climbing, prerequisites and technics are discussed.

Advantages of Intermediate Prosthesis in the Rehabilitation of the Lower Extremity Amputee: Preliminary Report. H. J. Bugel; W. Zilmer, and J. Grigsby. *(pp. 28-35; 2 figures and 5 tables)*

● A physical medicine and rehabilitation program utilizing an intermediate prosthesis for amputees has been successful over the past years in reducing the time interval between amputation and ambulation, with subsequent improvement in patient morale and well-being.

FEBRUARY

Rehabilitated for Living. M. Hoberman, and B. H. Lipton. *(pp. 75-81; 7 charts)*

● A review is presented of the status of graduates of the Joseph Bulova School of Watchmaking. Graduates whose disability resulted from injury or disease to the spinal cord, and those who have had tuberculosis or cardiac disease are studied. These particular individuals were selected because of the severity of the disability and the difficulty usually encountered in vocational placement.

Physical Medicine and Rehabilitation in a Chronic Disease Hospital. J. S. Tobis; M. Lowenthal, and I. Belmont. *(pp. 82-86)*

● One of the major health problems in America today is care of the chronically ill, especially the elderly patient. Physical medicine and rehabilitation offers a major contribution to the care of such patients in chronic disease hospitals, nursing homes and old age homes. This report deals with the multiplicity of services that have been developed by the physical medicine and rehabilitation department in a 2,000 bed municipal chronic disease teaching hospital. Subjects discussed include ward patient care, sheltered workshop program, prosthetic clinic, occupational therapy program for a psychiatric service, hospital-wide activities of daily living program, education and research. Of particular interest is a statistical analysis of the services provided, the active sheltered workshop program, problems in the management of young adult patients in a chronic disease set-up, accident control, and the children's rehabilitation program. A discussion of the problems encountered may assist others in dealing with patients in similar or analogous medical settings.

Physical Treatment Employed in the Rehabilitation of a Patient with Morquio's Disease. R. T. McReynolds, and O. L. Huddleston. *(pp. 87-91; 3 figures)*

● A seven-year-old boy with Morquio's disease was treated at an acute hospital for correction of progressive deformities of his trunk. Complete flaccid paralysis developed at T 11 following a spinal fusion. A partial laminectomy resulted in partial return of sensory and motor function. Bilateral fractures of the femora occurred three months later when the father attempted to teach the child to walk. During the course of treatment of the fractures, trophic ulcers developed on the back, knees, and ankles. The bones eventually healed and the patient was sent to a rehabilitation center for appropriate physical treatment. The ulcers were healed by using a heat cradle and placing the patient in a sawdust bed. Severe contractures of the hips and knees were present, in addition to the paresis and paralysis of the muscles of the lower extremities. Physical treatment in the form of neuromuscular re-education, hydrotherapy, mobilization therapy, gait training, and self-care training over a period of eleven months enabled the patient to learn to walk with the aid of crutches and long-leg braces. The vital capacity of the patient doubled by the use of breathing exercises and mobilization therapy.

Social Security for the Disabled. A. B. Price. *(pp. 92-95)*

● Determination of "disability" under the social security law provides for payments before normal retirement age, and it protects against loss of retirement and survivor benefits because of reduced earnings. An integral part of the disability program is the referral of the disabled for vocational rehabilitation services.

MARCH

Application of Rehabilitation Technics in Respiratory Insufficiency. L. Lewis. *(pp. 139-144)*

● Chronic respiratory disability is usually treated by technics applied according to the specific disease entity, not always in clear relation to the abnormal physiology which exists. There has been only limited application of the principles of rehabilitation in the management of respiratory disability. These principles would require the use of an integrated physical (respiratory assistive), pharmacologic, immunologic, psychosocial and broad medical-surgical program determined by the changing needs of the individual patient. Experience in total care of poliomyelitis patients with respiratory disability has led to a new approach to the management of other seemingly unrelated problems. Chronic respiratory insufficiency and acute crises due to pulmonary emphysema, fibrosis, atelectasis, kyphoscoliotic lung compression and many other conditions have been successfully managed by the use of any or all of the following measures: tracheostomy to diminish respiratory dead space and improve freedom of air flow; bronchodilator drugs to diminish airway resistance; mechanical respirators of many types to assure adequate ventilation and to control respiratory acidosis; oxygen to maintain an adequate partial pressure of oxygen in arterial blood; antimicrobial drugs and vaccines to eliminate infection; pneumoperitoneum to help restore diaphragm-lung relationships for effective breathing; resection of space occupying cysts or diseased lung tissue; physical and occupational therapy for general strengthening and for specific improvement of respiratory muscle function, and psychological support and social service, including vocational rehabilitation, paralleling the medical program.

An Analysis of Residual Disabilities (Paralysis and Crippling) Among 100,000 Poliomyelitis Patients: With Special Reference to the Rehabilitation of Postpoliomyelitis Patients. K. S. Landauer, and G. Stickle. *(pp. 145-151, 2 figures and 8 tables)*

● An analysis of residual disabilities among poliomyelitis patients has value for many reasons. An important one is to help determine the size and composition of the caseload of poliomyelitis patients who might benefit by further active rehabilitation procedures. The present analysis is based upon compilation and tabulation of data obtained from a series of patient-care reporting forms used by hospitals to notify chapters of The National Foundation for Infantile Paralysis, Inc., of the admission, continued care and discharge of poliomyelitis patients. More than 1500 hospitals have submitted more than 1,000,000 forms since the inception of a reporting system in 1952. Detailed case histories are available for slightly more than 100,000 hospitalized poliomyelitis patients. The reporting forms call for information on the area and degree of paralysis, as well as functional capacity, as reported by the attending physician, for each patient. It was therefore possible to make cross-classifications on disabilities, graded as none, slight, moderate or severe, in eight body areas; namely, left and right arms, left and right legs, intercostal muscles, diaphragm, abdominal muscles and trunk extensors. On the basis of a scoring system which combines degrees of disability for these specific areas of the body, it is possible to estimate percentages and numbers of paralytic patients with no, slight, moderate and severe residual disability. When these estimates are compared with reported functional capacity — ability to stand, walk, feed, toilet self, etc., — they match closely.

Morale and Productivity in a Sheltered Workshop for the Severely Disabled. H. S. Rabinowitz. *(pp. 152-157)*

● This report considers workshop climate, work habits, and personal interactions in a research sheltered shop for severely disabled, hospitalized patients before and after introduction of light subcontracting. Before subcontracting was initiated, production emphasis was given solely to handicraft projects. Introduction of subcontracts was accompanied by three changes in conditions of work. Possible connections between these changes and increases of morale and productivity are discussed.

New Apparatus: A Portable Overhead Pulley Apparatus with Adjustable Pulley Positions. L. B. Newman. *(pp. 158-159; 1 figure)*

● A portable overhead pulley apparatus which is simple, stable, inexpensive and easily constructed with standard parts is described. The equipment can also be quickly disassembled for shipping purposes.

APRIL

Paraffin Bath as Thermotherapy: An Evaluation. C. W. Stimson; G. B. Rose, and P. A. Nelson *(pp. 219-227; 7 figures)*

● The paraffin bath is an effective means of applying heat to the hands, wrists and elbows and to the feet and ankles. It is a valuable adjunct in local treatment of involved parts for such conditions as rheumatoid arthritis, osteoarthritis, tenosynovitis, and reflex sympathetic dystrophy. Contraindications for its use are impaired arterial or venous circulation, dermatitis, open wounds or heat sensitivity. The effectiveness of paraffin bath, whirlpool bath, and contrast bath in heating of an extremity is compared. A disadvantage in the past has been the difficulty in utilizing the paraffin bath for home treatment. A safe and practical way of arranging such therapy in the home is described.

Use of Cinefluorography for Evaluation of Normal and Abnormal Motion in the Neck. F. J. Kottke, and R. G. Lester. *(pp. 228-231; 2 figures)*

● A fluoroscopic intensifier system is described which makes possible the use of cinematographic recording of cervical vertebrae during motion. This apparatus exposes the patient to less radiation than does an ordinary fluoroscopic examination. The positions and relationships of the vertebrae through the full range of motion are recorded on 16 mm. film at 16 frames per second. Studies of normal and abnormal relationships are demonstrated.

Effects of Delayed Electric Stimulation on Experimentally Denervated Muscle. K. G. Wakim. *(pp. 232-234; 1 figure)*

● The effects of immediate and delayed electric stimulation were compared in an attempt to determine whether delayed electric treatment would help denervated muscle in a manner commensurate with the help afforded by immediate electric stimulation. Adult albino rats were used — normal controls and seven groups denervated by excision of a long segment of the sciatic and femoral nerves of the left extremity at the base of the thigh. At the end of the treatment period of 30 days the tendo achillis of the left leg in each rat was separated from its insertion and connected to the work output machine for determination of the initial and total work output of the gastrocnemius, soleus, and plantaris muscles. The findings clearly indicate that delayed electric stimulation did not improve the work output and endurance of denervated muscle.

Rehabilitation of the "Permanently and Totally Disabled" Patient. M. Hoberman, and C. F. Springer. *(pp. 235-240; 8 tables)*

● Preliminary results of a pilot program to rehabilitate the "permanently and totally disabled" welfare recipient are reported. The areas of improvement included self-care activities, vocational potentialities, ambulation status, and living arrangements. While these results are most encouraging, especially since the gains have been maintained in practically all patients reviewed for at least six months following discharge from the hospital, they cannot be considered final. In many instances difficulties in the patient's total adjustment encountered after discharge, such as in housing or employment, may nullify much of the benefit previously achieved.

JUNE

Some Factors Influencing the Temperature Distribution in Thighs Exposed to Ultrasound. J. F. Lehmann, and E. W. Johnson. *(pp. 347-356; 10 figures and 6 tables)*

● Thigh specimens were exposed to a uniform ultrasound field under well-controlled conditions. The temperature distribution was measured along the axis of the sound beam and the heating pattern studied with special reference to the occurrence of the selective rise of temperature in certain tissues. The factors determining the temperature elevation in the specimen such as absorption and interface reflection of ultrasound, the specific heat and heat conductivity of tissues, were analyzed and their significance for the resulting temperature distribution discussed. Also the temperature gradient in the thigh as it occurs in man and its influence on the rise of temperature resulting from exposure to ultrasound was investigated.

Effects of Breathing Exercises on Pulmonary Emphysema. J. B. Redford. *(pp. 357-365; 2 figures and 3 tables)*

● According to studies done to date, breathing exercises seem to have little objective value in emphysema but their subjective value should not be dismissed lightly. No laboratory methods are yet devised for measuring all factors that may be improved by these exercises. The main stress should be on the importance of living within the physical bounds imposed by the disease and the use of these exercises in recovery from dyspnea when these bounds are exceeded.

Ambulation Problems in Hemiplegia. E. J. Lorenze; A. J. DeRosa, and E. L. Keenan. *(pp. 366-370)*

● This is a report on 200 cases of hemiplegia resulting from a variety of etiological factors including trauma, cerebral vascular accident including hemorrhage and thrombosis, cerebral embolus and others, which were admitted to the rehabilitation service of The Burke Foundation. A specific analysis of the physical, social, psychological and vocational status of these patients is included as well as the results of rehabilitation treatment. In particular, the paper analyzes those patients who failed to achieve independent ambulation; achieved only partial independence in ambulation, or who required a prolonged period of treatment before a satisfactory degree of ambulation was achieved. Ordinary problems of a general medical nature, associated amputation, fracture or arthritis and paralytic muscular factors are evaluated. However, primary stress is not placed upon these but rather on problems of cerebellar system involvement, ataxia, apraxia, perceptual problems. The specific problems of muscular weakness and spasticity are outlined.

Bilateral Effects of Unilateral Exercise: Experimental Study Based on 120 Subjects. R. D. Kruse, and D. K. Mathews. *(pp. 371-376; 3 figures and 3 tables)*

● The purpose of this study was to test the bilateral effects of unilateral strength-building exercises on the elbow-flexor muscles. Sixty male college students were periodically subjected to ergometric exercises of the left elbow-flexor muscle group for four weeks. Fifteen subjects exercised twice weekly, fifteen three times weekly, fifteen four times weekly, and fifteen five times weekly. A control group of equivalent size was matched to each exercising group. The results of this study are: statistically significant increases in strength and endurance of the left (exercised) elbow-flexor muscles in the groups exercising three, four, and five times weekly; no statistically significant increases in strength and endurance of the left (exercised) elbow-flexor muscles in the group that exercised twice weekly; no statistically significant increase in strength and endurance of the right (unexercised) elbow-flexor muscles in any of the experimental groups, and no statistically significant increases in strength and endurance of the flexor muscles of either elbow in any of the control groups.

Swimming by the Handicapped. N. K. Covalt. *(pp. 377-380)*

● The majority of handicapped persons can learn to swim; many can be taught to get in and out of a pool with little or no aid. Since swimming is one sport that utilizes all muscles, optimal physical conditioning can be obtained or maintained. This is a step beyond definitive underwater therapy — which it can also enhance, but which is no longer needed by a rehabilitated individual. It furnishes recreation, socialization and competition.

JULY

Heidelberg Pneumatic Arm Prosthesis. E. F. Hoerner. *(pp. 411-416; 4 figures)*

● The Pneumatic Arm, devised in Germany, offers an additional asset to persons who have lost part of an upper extremity, as well as those who have a disability resulting in a flaccid upper extremity, such as quadriplegia from poliomyelitis or trauma. The principle of this orthopedic appliance is the use of carbon dioxide gas as the driving force or energy used in carrying out needed functional motions of the mechanical parts of the prosthetic apparatus. This gas is enclosed in a small cylinder which is contained within the prosthetic device. The person using such an apparatus controls the motion desired by releasing the gas outlet valve through pulling on a cable, using such movements as a shoulder shrug, shoulder flexion, intrascapular excursion, body (trunk) bending, or other similar procedures. In this way, it has been possible to provide the disabled person with the following appliance motions: prehension of the hand or terminal device, pronation and supination of the forearm (a motion that has not been possible to duplicate with any other prosthetic device), elbow flexion and extension, shoulder flexion and extension. All of these motions are performed smoothly and quickly, without a time lag, and with a mild degree of energy expenditure by the wearer. This appliance has also been found useful in assisting persons, with a flaccid upper extremity to carry out needed functional motions, by applying the energy supplied by the gas to drive the mechanical parts of an upper extremity functional arm, and/or hand, and/or shoulder brace.

Interpersonal Processes in a Respirator Center. C. P. Deutsch; I. E. Alger; E. McNamara; J. Williams; J. F. Shor, and J. G. Benton. *(pp. 417-425; 2 figures and 3 tables)*

● The purpose of this study was to investigate the quantity and quality of the continuing interpersonal process in a chronic care center. The data were gathered by means of procedures derived largely from social psychology, including structured interviews with patients and staff, daily time-sample observations, and process recording of all conferences during the period. The data were coded and the results analyzed quantitatively.

Sequence of Action of the Diaphragm and Intercostal Muscles During Respiration: I. Inspiration. G. H. Koepke; E. M. Smith; A. J. Murphy, and D. G. Dickinson. *(pp. 426-430; 2 figures and 1 table)*

● Previous electromyographic observations in the laboratory indicated that the first intercostal muscle and diaphragm were used in quiet breathing but that expiration occurred passively. A subsequent investigation has been made of the sequence of action of intercostal muscles at measured lung volumes during the various intervals of the respiratory cycle. The measurements of lung volumes were synchronized with the electromyographic activity of the intercostal muscles of normal men. The activity of several muscles was recorded simultaneously, by means of the multiple channel electromyograph using the needle technic. The evidence indicates that the intercostals were serially recruited with deeper breathing. In most instances the first intercostal muscle showed electrical activity at the onset of inspiration. As this inspiration deepened there was successive recruitment of the second through the eleventh intercostal muscles.

An Experimental Group Approach Supplementing Rehabilitation. I. A. Kraft. *(pp. 509-513)*

● An experimental group therapy program was instituted with parents of adult cerebral palsy patients. It attempted to test certain hypotheses about alterations of personality in cerebral palsy patients, especially those with speech handicaps.

Employability Following Poliomyelitis. M. E. Knapp, and L. Sher. *(pp. 514-518; 8 tables)*

● This paper is a statistical study of the effect of poliomyelitis upon the employability and economic status of 4,409 patients discharged from the Elizabeth Kenny Institute from 1942 through 1955. This information is correlated with the type and severity of involvement and the age at which the patient contracted poliomyelitis.

SEPTEMBER

Nutrition and Dental Care in a Physical Medicine and Rehabilitation Program. S. I. Silverman, and J. S. Tobis. *(pp. 555-559)*

● There is prevalent today a relatively widening gap between carefully planned and prepared dietary requirements of chronically ill patients and the actual ingestion of these diets. One of the major causes of this gap is the character of the dental care rendered to both the homebound and the institutionalized chronically ill patient. The quantity of food and the selection of food ingested by patients are influenced and conditioned by dental treatment and the general state of masticatory efficiency of the patient. The ingested diet is also conditioned by the social dietary history of the patients, the grouping of the patients at mealtime, the frequency of mealtime, and the availability and the character of supplementary meals. Dental care when carefully integrated in the scheme of physical medicine and rehabilitation programming can broaden considerably the base of general supportive therapy, not only in implementing nutritional treatment of the patients, but also in contributing to their speech capacity and general esthetic appearance. Thus adequate dental care, with emphasis on the prosthodontic considerations aid in the psychological adjustment of the patients in the management of their chronic illness.

Pain Threshold Measurements After Therapeutic Application of Ultrasound, Microwaves and Infrared. J. F. Lehmann; G. D. Brunner, and R. W. Stow. *(pp. 560-565; 4 tables)*

● Pain threshold measurements have been made with the Wolff and Hardy method after application of ultrasound, microwaves and infrared to volunteers. It was found that the pain threshold was increased when these modalities were applied to the peripheral nerve trunk and the pain threshold measured in the area of the nerve distribution. The pain threshold was also elevated when these modalities were applied directly to the same area where the pain threshold was determined afterwards. These results could be obtained only if comparatively high doses were applied.

Establishment of Oscillometric Clinical Norms for Arterial Circulation in the Legs in Arteriosclerotic Obstructive Disease. B. S. Troedsson. *(pp. 566-571; 2 figures and 7 tables)*

● Disability, and ultimate loss of extremities, is increasing as a result of decreased arterial circulation due to arteriosclerosis in an aging population. Early discovery and proper management at the various stages of the disease can shorten disability and prevent amputations. Because of this, it is important to be able to evaluate the degree of arterial circulation and to localize the site of obstruction. By observation and measurement on a series of cases, using the oscillometer, it is possible to establish certain clinical norms. These norms are the gangrene point, i.e., the readings below which gangrene is imminent; the ulcer healing point, i.e., the readings below which an ulcer will heal slowly or not at all; amputation site healing point, i.e., the readings above which the amputation site will heal readily; amputation site weight-bearing point, i.e., the readings above which a prosthesis can be used without fear of stump breakdown and above which there is also a margin for future deterioration of the circulation, and lower limit of normal point, or walking point, i.e., the readings below which a person will complain of symptoms of arterial insufficiency when walking. These norms have been found very useful in peripheral vascular work.

Comparative Strength of Neck Flexor Muscles in Normal and Postpoliomyelitis Children: A Preliminary Study. T. Humphrey, and D. Rubin. *(pp. 572-576; 3 figures)*

● This study was prompted by the questions what is the "normal" strength of a child's neck flexors? — is it possible to develop an objective measure for determining the degree of weakness in the neck flexors of postpoliomyelitis children? A group of 100 children between the ages of 3 and 12 was tested; 47 of this group were "normal" controls and 53 were postpoliomyelitis patients. For the purpose of the test the subjects were divided into three age categories: group A from 3-6 years, group B from 6-9 years, and group C from 9-12 years. By utilizing a fixed supine position and free active motion a base line of performance was obtained. Resistance was then added by means of an adjustable head strap, weight pan, and weights. The preliminary results demonstrated that there is a great variance in neck flexor strength in both postpoliomyelitis and nonpoliomyelitis children. Certain interesting observations were made relative to neck flexor strength within each group, between the two groups, and on the basis of body type.

Prevention and Control of Staphylococcus Infections in Hospitals. (Bulletin 1). American Hospital Association. *(pp. 577-580)*

● In view of the increasing problem of staphylococcal infections in hospitals and the consequent need to call the recommendations in this bulletin to the attention of the field, the Board of Trustees of the American Hospital Association requested this information be printed in "journals of other health organizations."

Pressure Gauge Device as an Aid in Treating Hip Contractures Following Above-Knee Amputation. T. F. Childs, and M. Holtzman. *(pp. 581-583; 3 figures)*

● A method of facilitating flexor relaxation during active extension of the hip is described. Adequate range of motion improves function with a prosthesis. Flexion-abduction contractures decrease range of motion when they occur in above-knee amputees. Flexion contracture can be prevented or stretched by active extension and simultaneous relaxation of the flexors. Abduction contractures automatically improve with improvement of flexion contracture.

OCTOBER

Trochanteric Bursitis: Diagnostic Criteria and Clinical Significance. T. P. Anderson. *(pp. 617-622; 1 figure and 6 tables)*

● A review of the literature would imply that trochanteric bursitis of the hip is rare. Most reports deal with "acute calcific bursitis." It is chronic trochanteric bursitis, a more common condition but often unrecognized because of its subtlety, for which an attempt is made in this study to provide criteria for its diagnosis. An analysis is made of pertinent factors in the history and physical examination of 45 cases. In considering whether or not trochanteric bursitis is a separate clinical entity, it is shown that in more than 50 per cent of these cases the bursitis was associated with some other painful situation in the same lower extremity or the back.

NOVEMBER

DECEMBER

vascular disease or chronic neurologic disease interferes with physical performance and what training, mechanical aids and adjustments will do for physical ability and total functional fitness. The purpose of training for the aged and handicapped is to increase their functional fitness, their ability to handle activities of daily living and management of a suitable occupation. In this instance, training is not a purpose onto itself. It should be designed to prepare for these activities on an individual basis, take maximum advantage of experience and skill, and give due consideration to psychologic factors. Thorough investigation is needed of the metabolic, respiratory and circulatory effects of exercise, of the methods, limits and goals of training, and finally a detailed study of the physiologic effects of specific daily, recreational and occupational activities in specific disabilities.

Influence of Surgical Metal Implants on the Distribution of the Intensity in the Ultrasonic Field. J. F. Lehmann; K. E. Lane; J. W. Bell, and G. D. Brunner. *(pp. 756-760; 7 figures, 2 tables and 1 equation)*

● The acoustic properties of metals used for surgical implants have been investigated, and it has been found that a large amount of ultrasonic energy is reflected at the tissue-metal interface. This leads to the establishment of patterns of standing waves in front of the implants and to focusing. The increase of intensity in the focal area has been measured and found to be appreciable. Further investigation seems to be necessary to determine whether or not the increase in intensity produced by the presence of surgical metal implants could lead to overheating of certain areas in the tissues.

Some Medicolegal Aspects of Physical Medicine and Rehabilitation. H. Wing, and A. L. Watkins. *(pp. 761-765)*

● This paper points out the ever-growing interrelationships between law and the specialty of physical medicine and rehabilitation. It is divided into three parts: 1. A brief discussion of applicable features of medical jurisprudence; 2. liability and responsibilities of physicians and other personnel of the departments within hospitals as well as legal implications of procedures and equipment employed, and 3. the insurance aspects which deal with medical reports, cooperation with statutory and administrative bodies such as Workmen's Compensation Boards, Rehabilitation Commissions, etc., and the evaluation of physical disability for purposes of litigation, settlements, or testifying in courts.

Physical Medicine and Rehabilitation: Its Responsibility and Contributions to World Understanding. H. A. Rusk. *(pp. 766-769)*

● Rehabilitation of disabled children and adults is an international language which transcends national ideological racial and linguistic barriers. It is one of America's sharpest tools for making friends. The world looks to the United States, as the international leader in physical medicine and rehabilitation, to assist it in sharing our knowledge through professional education of physicians and paramedical personnel throughout the world. This responsibility of the physiatrists of the United States has been greatly increased both by the political dangers of the current period and the rising incidence of physical disability throughout the world resulting from the prolongation of the life span. Never before, however, have the opportunities been so bright for us to meet this responsibility.

Studies on the Disturbance of Longitudinal Bone Growth: II. Effect of the Sympathetic Nervous System on Longitudinal Bone Growth After Acute Anterior Poliomyelitis. F. J. Kottke; G. G. Gullickson, Jr., and M. E. Olson. *(pp. 770-779; 3 figures and 4 tables)*

● Studies of the rate of growth of the long bones of the lower extremities have been conducted on 32 patients who had paralytic poliomyelitis involving one lower extremity primarily. Muscular strength, soft tissue mass, range of motion of the joints, posture, gait, and use of braces, crutches or canes were recorded. X-ray measurements of the bones of the lower extremities were made at intervals over a six-year period of time. The rate of growth of the involved lower extremity was compared with the rate of growth in the uninvolved extremity. Comparisons of the relative rates of growth were made during intervals when patients were receiving no medication and during the intervals when sympatholytic drugs were taken regularly. The influence of activity, limitation of motion and the use of braces are considered in evaluating the relative rates of bone growth. A relationship was found between sympathetic activity and the rate of longitudinal growth of bone which appears to have its influence through the control of the circulation to the extremity.